

Product Name: **BOV Kompact Kia Stinger**
 Product Description: BOV Kompact Kia Stinger
 Product Number: TS-0203-1025
 Document Version: V1.00 Rev A



IMPORTANT NOTES ON YOUR BOV

- Turbosmart accepts NO responsibility whatsoever for incorrect installation of this product which is potentially hazardous and can cause serious engine damage or personal injury.
- The Kompact series BOV is designed for use as a factory replacement
- Ensure the engine is cold prior to installation.

RECOMMENDATIONS

- **Turbosmart recommends that your Blow off valve (BOV) is fitted by an appropriately qualified technician**

KIT CONTENTS

Please check that the following items have been provided in your Kompact Series BOV packaging

Part	Description	Use
1	Turbosmart Kompact Series BOV	Main unit x2
2	Vacuum Hose	Fix plumb back hose to BOV
3.1	M6 Flange Bolts	Mount BOV to mounting flange x8
3.2	Blanking plug	Black off VTA trumpet to convert to pure plumb back. X2
3.3	Cable Tie	250mm cable tie x2
3.4	Tee	Hose Tee piece
3.5	Hose clamp	Spring action hose clamps x6
4	Turbosmart Sticker	Turbosmart sticker

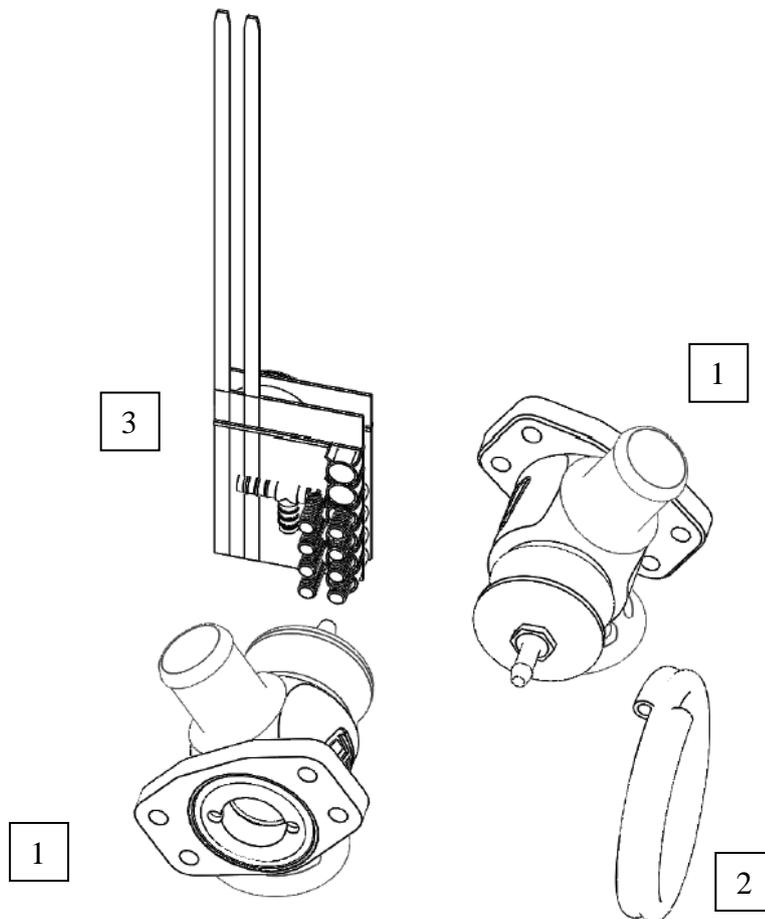


Figure 1 - Kit Contents

TOOLS REQUIRED

- 5mm hex key
- Screw drivers
- Pliers
- Socket Set

ABOUT YOUR KOMPACT SERIES BOV

A direct fit high performance replacement for the factory all plastic unit, the Turbosmart Kompact BOV suits the Kia Stinger. The Turbosmart unit is made of billet aerospace grade aluminium with high temperature seals that allows for minimal leakage and a complete seal across the bypass aperture providing as much performance as possible.

Benefits include:

- Direct fit upgrade for the factory BOV on Kia Stinger
- Packaged with a blanking plug to switch the unit into pure vent to atmosphere or plumb-back modes
- All billet CNC construction and attractive anodized finish
- Manufactured, assembled and validated in-house at Turbosmart HQ

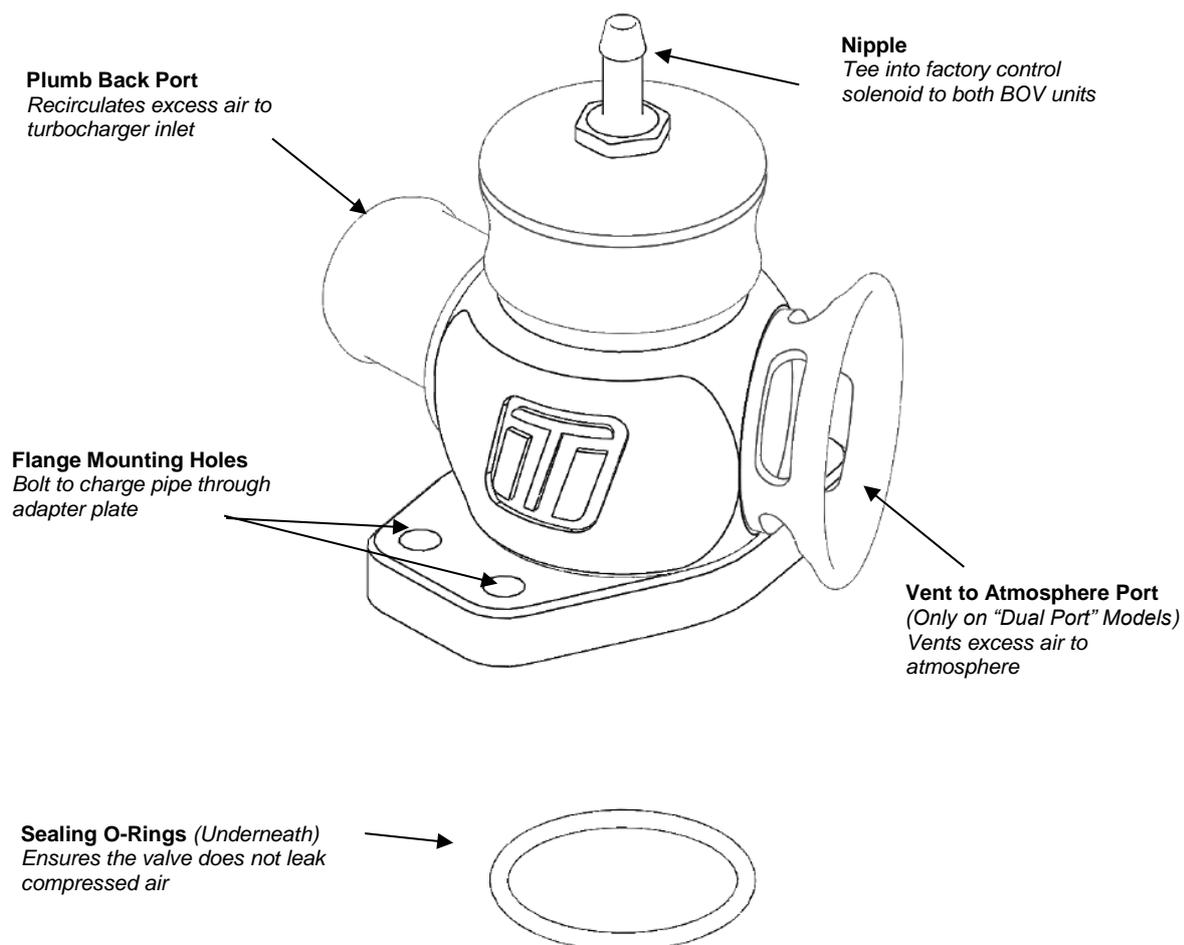


Figure 2 – Stinger Kompact BOV Overview

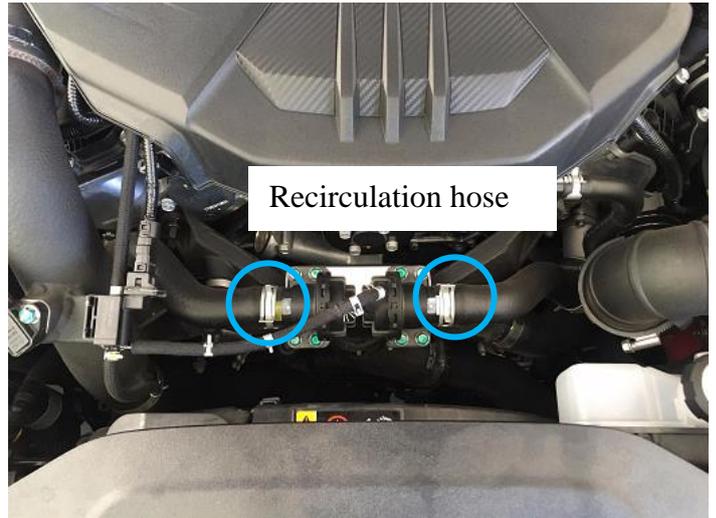
FITTING YOUR KOMPACT SERIES BOV

1 Identify Diverter valve location

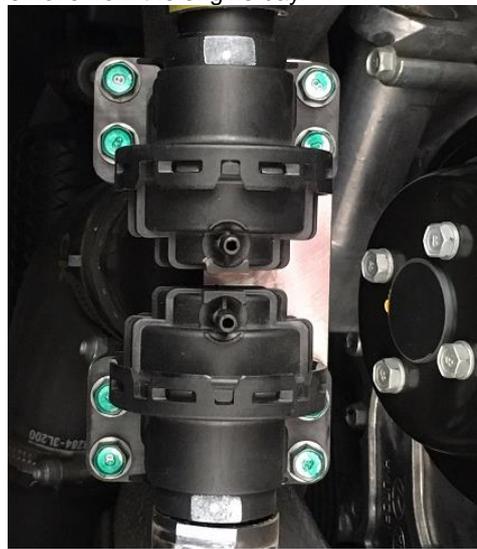
Identify the location of the factory diverter valve assembly, The Kia Stinger factory bypass valves are located at the front of the engine and have easy access

NOTE!

It may be required to remove auxiliary components to access the diverter valve, ensure you consult your local specialist or a service manual for correct disassembly procedures.

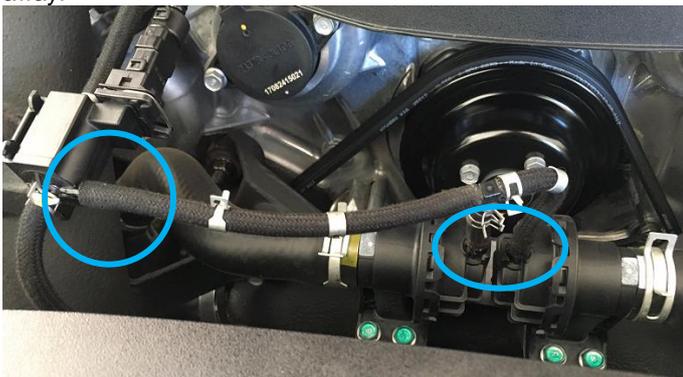


Remove the four bolts holding the diverter valve to the charge pipe and remove from the engine bay.



2 Remove the OEM diverter valve

Remove the signal hoses from the factory control solenoid and the bypass valves by clamping the tabs on the spring action hose clamps and moving away from the end of the hose. Twist the hoses to break the initial seal of the hose from the nipple and pull away.



Remove the recirculation hose from the valve by loosening the hose clamp,

3 Mount your new Turbosmart Kompact BOV

Align your new Turbosmart Kompact BOV with the flange on the charge pipe, align the plumb back port outwards to line up with the recirculation hoses, place all bolts in the flange of the BOV before sitting in place. Ensure the sealing O-rings are correctly seated in their grooves and tighten down the bolts.

Re attached the recirculation hose onto the BOV and tighten the hose clamp. Align the swivel nipple on the cap of the BOV and attach the signal hose.

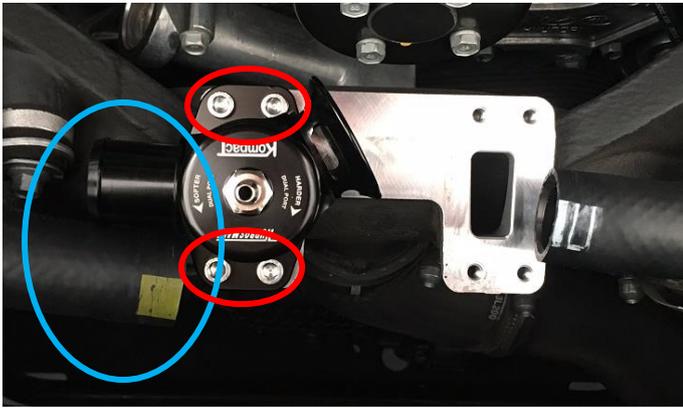
Congratulations, your Turbosmart Kompact Series BOV is installed and ready for use. Double check all connections and mounting screws. Start your engine and check for leaks.

4 Connecting the Signal hose

Using the supplied vacuum hose and Tee piece, connect the vacuum hose to the OEM control solenoid using hose clamps to secure it in place. Use the Tee piece to split the hose to join to both BOV's.



Congratulations, your TurboSMART Kompact Series BOV is installed and ready for use. Double check all connections and mounting screws. Start your engine and check for leaks.



Repeat the process for both BOV units.

Slide the factory recirculation hoses over the plumb back fitting of the BOV and secure the hose clamps.



ADJUSTING YOUR BOV (DUAL PORT ONLY)

The aim of the adjustment on the Dual port is to make sure that the piston is hard closed at idle and that the piston closes fast enough to minimise backfiring and not stall the engine. In most cases, the cap is in the correct position from factory.

INSTALL THE BOV WITH THE FACTORY SETTING FIRST BEFORE PERFORMING ANY ADJUSTMENT.

Adjustment to the BOV is made by rotating the cap. To increase the spring force on the piston, rotate the cap clockwise in the direction of hard as marked on the top of the cap. To decrease the spring force on the piston, rotate the cap anticlockwise in the direction of soft as marked on the top of the cap - **CAUTION** - Do not rotate the cap beyond the O-Ring groove.

- Start with the BOV cap at the maximum soft position (The indicator O-Ring should be completely covered by the edge of the cap)
- With the engine at idle the exhaust port should be closed off by the piston – the piston should be hard against the seat and not floating or moving
- Free rev the engine and back off quickly, the engine should return to normal idle speed – if the engine drops below idle or stalls increase the spring tension by one turn
- Repeat this process until the engine free revs and returns to normal idle speed
- Test drive the car and ensure that when decelerating or changing gears that the engine has minimal backfiring and no stalling. If backfiring is excessive or stalling is noticed then check all connections made during the installation, otherwise increase the spring tension

TROUBLE SHOOTING

The following points should be checked if you find that your engine is dipping below normal idle, stalling or if the BOV is functioning poorly. Please note: the following checks will cure 99% of problems experienced with a BOV.

- Check the vacuum hose for splits, cracks, loose connection, kinking or any obstruction – old or fatigued hose may collapse under vacuum causing an obstruction.
 - With the engine running remove the vacuum / boost hose from the nipple in the cap of the BOV, there should a loud hissing sound. The engine should idle poorly, double check by covering the end of the hose with your finger – otherwise the hose is blocked.
 - Check to see if the BOV is blocked or contaminated with dirt or debris.
 - Ensure that the vacuum / boost source is not shared and that the vacuum source is directly from the inlet manifold.
 - Check the seal between the charge pipe flange and the BOV. Make sure the supplied O-Rings are installed properly and the BOV Flange is secured on the compressor cover flange with the 3 supplied screws.
 - Ensure the spring clamps are secured on silicon hoses and fittings.
 - If the valve does not open properly or is slow to react, it could be due to the mapping of the drive by wire system from such things as aftermarket chips and engine tunes. Check with the tuner that the mapping of the throttle is the same as OEM.
 - The valve may not open if the engine is just free revved. Check that the valve operates by driving the vehicle.
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